

REMARKS

Pursuant to the Office Action for the above-identified case mailed May 9, 2003, Applicants submit this Response. In this case, Claims 1 to 26 are pending. Claims 1, 12, 23 and 26 are being amended herein. No new matter is being introduced by way of the amendments. Checks in the amount of \$420.00 and \$770.00 are submitted herewith to cover the cost of a Two Month Extension of Time and an accompanying Request for Continued Examination. Please charge Deposit Account No. 02-1818 for any additional fees owed.

In the Office Action, Claims 1 and 12 to 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,809,254 to Edsall ("*Edsall*"). Claims 2 to 11 and 19 to 22 were rejected under 35 U.S.C. § 103(a) as being obvious in view of *Edsall* and the disclosure in the Background of the application ("*Background*"). Claims 23 to 26 were rejected under 35 U.S.C. § 103(a) as being obvious in view of *Edsall*, the Background and in further view of U.S. Patent No. 4,035,754 to Klienbohl ("*Klienbohl*")

Claim 1 as amended is directed to a diagnostic blown fuse indicator for a fuse having both a short circuit element and a current overload element. The device includes a short circuit indicator in electrical communication with the short circuit element. The short circuit indicator provides visual indication of a short circuit condition. A current overload indicator electrically communicates with the current overload element. The current overload indicator provides a visual indication of an overload condition. The short circuit indicator, the current overload indicator, the short circuit element and the current overload element are configured and arranged to be inserted together into a protective housing and thereafter be connected electrically to at least one conductive end of the housing.

Applicants respectfully submit that *Edsall* does not teach or suggest Claim 1 as amended. The *Edsall* device is different from the present invention in a number of respects. In one respect, the *Edsall* device is different because it includes separate housings for the short circuit element and the current overload element. Those housings are removably attached to one another. The *Edsall* device enables the portion of the fuse that opens due to an electrical event to be replaced and a portion that does not open to be reused. While such a configuration on the surface may appear to be advantageous, the apparatus required

to separate the elements is cost prohibitive. It is more desirable to place the components in a single body as is done in the present invention.

Claim 1 as amended highlights structural features of the present invention that the *Edsall* device does not include or teach. As illustrated in Figs. 1 and 2 of the present invention, the elements 18 and 20 and indicators 28 and 30 are sized, shaped and interconnected so that they can be placed together inside a body 16. The apparatus of Figs. 1 and 2 of the present invention, having end caps 12 and 14 fixed onto and over both ends of body 16, necessitates that one of the end caps is connected electrically to the elements 18, 20 and indicators 28, 30 after the elements and indicators are placed inside the body.

The above-claimed blown fuse indicator is not taught by *Edsall*, which in Fig. 6 of that reference discloses indicators 40 and 41 that are separate from one another. Indeed, indicators 40 and 41 are disposed outside of the current limiting device A and overload device B, which represent schematically like devices illustrated in Figs. 1 and 4 of *Edsall*. Because devices A and B of *Edsall* are separate and replaceable with respect to one another, the elements and indicators of *Edsall* are not capable of being inserted together either into the housing of element A or the housing of element B.

Also, sleeve 49 of *Edsall* does not have conductive end caps, negating the possibility that sleeve 49 could teach the claimed limitation that the elements and indicators be configured to connect electrically to at least one conductive end of the housing.

Further, it is clear From Fig. 6 and the corresponding disclosure of *Edsall* that devices A and B have to be crimped to conductive ends 44 and 47 of cables 45 and 48, respectively, of *Edsall* prior to being enclosed within sleeve 49. That is, devices A and B and indicators 40 and 41 of *Edsall* are not configured and arranged to be connected (electrically or otherwise) to at least one end of sleeve 49 after being inserted into sleeve 49, as specified in Claim 1. Moreover, given the fact that *Edsall* teaches crimped tubes 43 and 46 extending from elements A and B to make electrical connection with elements A and B and indicators 40 and 41, it is difficult to imagine any type of housing or enclosure having end caps that could be crimped to tubes 43 and 46 after that imagined housing is

placed over elements A and B and indicators 40 and 41. Simply stated, elements A and B and indicators 40 and 41 are not configured and arranged for such connection.

For at least the above-described reasons, Applicants respectfully submit that amended Claim 1 and Claims 2 to 11 that depend therefrom are each structurally different, patentably distinct and allowable over *Edsall*.

Applicants incorporate each of the arguments in the previous response made in opposition to the obviousness rejection of dependent Claims 3 to 11. Applicants again respectfully submit that Claims 3 to 11 provide additional patentable distinctions over *Edsall* and the Background.

Claim 12 as amended is directed to a fuse having a short circuit element in electrical communication with a current overload element. The fuse includes a short circuit indicator and a current overload indicator connected electrically via a common electrical lead to a point between a high electrical resistance area of the short circuit element and the current overload element.

Applicants respectfully submit that *Edsall* does not teach or suggest Claim 12 as amended. As discussed above, the indicators 40 and 41 of *Edsall* are separate from one another due to the fact that elements A and B of *Edsall* are separately attached to each other. *Edsall* does not therefore teach or suggest, and indeed teaches away from, the use of a common physical lead to connect the short circuit indicator and current overload indicator to a point between a high resistance area of the short circuit element and a current overload element. The indicators 40 and 41 of *Edsall* are instead distinct from one another and not connected via a common electrical lead to one another.

Moreover, indicators 40 and 41 do not connect via the same physical lead to an area of high resistance on the short circuit element. Indeed, *Edsall* does not appear to disclose a distinct area of high resistance on the short circuit element but instead provides links 18 with multiple apertures or high resistance areas.

Applicants note that the Office Action considers conductor 52 and connections 40, 41 to all constitute one conductor since all represent a point of equal electrical potential. The language of Claim 12 has been modified from "same conductor" to "common electrical lead" to clarify that the same physical structure is required, which conductor 52

and connections 40, 41 clearly are not. Claim 12 as amended is structurally different than *Edsall*.

Applicants incorporate each of the arguments in the previous response made in opposition to the obviousness rejection of Claims 16 to 21. Applicants again respectfully submit that those claims provide additional patentable distinctions over *Edsall* and the Background.

For at least the above-described structural reasons, Applicants respectfully submit that amended Claim 12 and Claims 13 to 22 that depend therefrom are each structurally different, patentable and allowable over *Edsall*. It should be appreciated that the patentability of Claims 1 and 12 renders moot the obviousness rejections of Claims 2 to 11 and 19 to 22.

Claims 23 and 26 as amended are directed to a fuse having diagnostic indication. The fuses include a short circuit indicator communicating in parallel with a short circuit element and a current overload indicator communicating in parallel with a current overload element. A single, rigid body is provided that houses the elements and indicators. Moreover: (i) the body is fixed to conductive end caps that are exposed and configured to be fitted to mating connectors; (ii) the elements and indicators communicate electrically with the end caps; and (iii) the body defines at least one opening sized and shaped for a person to view both indicators located within.

Applicants respectfully submit that Claims 23 and 26 as amended are patentably distinct in view of *Edsall*, the Background and *Klienbohl* for multiple reasons. First, no reference shows a single, rigid body that houses multiple elements and multiple indicators. The housings of elements A and B of *Edsall* are separate and not part of a single housing. Sleeve 49 is not rigid but is instead moldable plastic, e.g., polyethylene (col. 5, lines 57 to 60).

Also, the references in combination do not show multiple elements and indicators placed within a single, rigid body, which has end caps that are exposed and configured to be fitted to mating connectors. Sleeve 49 of *Edsall* does not have end caps. Moreover, Sleeve 49 does not connect to devices that are exposed and configured to be fitted to mating connectors.

Further, the elements and indicators of *Edsall* are not connected electrically with end caps that are fixed to a single, rigid body that houses the elements and indicators.

Still further, no reference shows a body that defines at least one opening sized and shaped for a person to view multiple indicators located within a single, rigid body housing the elements and indicators. Sleeve 49 is a clear plastic cover and does not define such openings. The housings of elements A and B of *Edsall* are separated from indicators 40 and 41 and therefore do not and cannot define at least one opening through which to view the multiple indicators.

For at least the above-described structural reasons, Applicants respectfully submit that amended Claims 23 and 26 and Claims 24 and 25 that depend from Claim 23 are each structurally different, patentable and allowable over *Edsall*, the Background and *Klienbohl*.

An earnest endeavor has been made to place this application in condition for formal allowance and in the absence of more pertinent art such action is courteously solicited. If the Examiner has any questions regarding this Response, Applicants respectfully request that the Examiner contact the Applicants' attorney designated below.

Respectfully submitted,

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